AMENDMENTS TO THE CLAIMS

1. (previously presented) A method for reducing the number of metastases in an animal exhibiting a primary tumor comprising administering to said animal a dose of 10 mg/kg to 150 mg/kg of an aminoalkylphosphorothioate or active metabolite thereof, wherein the number of metastases is reduced.

2. (canceled)

3. (previously presented) The method of claim 1, wherein the dose is about 10 mg/kg to about 100 mg/kg.

4. (previously presented) The method of claim 1, wherein the dose is about 10 mg/kg to about 50 mg/kg.

5. (previously presented) The method of claim 1, wherein the dose is about 10 mg/kg to about 25 mg/kg.

6. (previously presented) The method of claim 1, wherein said animal is a human.

7. (previously presented) The method of claim 1, wherein said tumor is a sarcoma or carcinoma.

8. (canceled)

9. (previously presented) The method claim 1, wherein said aminoalkylphosphorothioate is the thiol form.

10. (previously presented) The method claim 1, wherein said aminoalkylphosphorothioate is the disulfide form.

11. (previously presented) The method of claim 1, wherein said aminoalkylphosphorothioate or active metabolite thereof is selected from the group consisting of WR-2721 (amifostine), WR-1065, WR-638, WR-77913, WR-33278, WR-3689, WR-2822, WR-2529, WR-255591, WR-2823, WR-255709, WR-151326 and WR-151327.

12. (previously presented) The method of claim 1, wherein the route of administration of said aminoalkylphosphorothioate or active metabolite thereof is intravenous, intraperitoneal, intradermal, intramusculararal, dermal, nasal, buccal, rectal, vaginal, inhalation, or topical.

13. (previously presented) The method of claim 1, wherein said aminoalkylphosphorothioate or active metabolite thereof is formulated into solutions, suspensions, tablets, pills, capsules, sustained release formulations, powders, creams, ointments, salves, sprays, pumps, liposomes, suppositories, inhalers, and patches.

14 – 22 (canceled)

23. (previously presented) The method of claim 1, further comprising monitoring the ability of the dose of an aminoalkylphosphorothioate or active metabolite to reduce metastases in the animal.

24. (previously presented) The method of claim 23, wherein the monitoring comprises measuring the level of angiostatin stimulation.

25. (previously presented) The method of claim 23, wherein the monitoring comprises measuring the level of activity of a matrix metalloproteinase.

26. (previously presented) The method of claim 25, wherein the matrix metalloproteinase is MMP-2.

27. (previously presented) The method of claim 25, wherein the matrix metalloproteinase is MMP-9.

28. (previously presented) The method of claim 23, wherein the monitoring comprising measuring the stimulation of MnSOD.

29. (previously presented) The method of claim 28, wherein the measuring of MnSOD stimulation comprises measuring the stimulation of MnSOD gene expression.

30. (previously presented) A method for inhibiting metastasis in an animal exhibiting a primary tumor comprising administering to said animal a dose of 10 mg/kg to 150 mg/kg of an aminoalkylphosphorothioate or active metabolite thereof, wherein the number of metastases is inhibited.

31. (previously presented) A method for preventing metastasis in an animal exhibiting a primary tumor comprising administering to said animal a dose of 10 mg/kg to 150 mg/kg of an aminoalkylphosphorothioate or active metabolite thereof, and wherein metastases are prevented in said animal.

32. (previously presented) The method of claim 11, wherein said aminoalkylphosphorothioate or active metabolite thereof is WR-2721.

33. (previously presented) The method of claim 11, wherein said aminoalkylphosphorothioate or active metabolite thereof is WR-1065.

34. (new) The method of claim 1, wherein the dose is about 50 mg/kg to 100 mg/kg.